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Environmental Stewardship— Environmental Characterization and Remediation

Quality Procedure

for Inspection and Maintenance Requirements for Nuclear Environmental Sites

☒ NES Approved

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QP-8.4, R0, Inspection and Maintenance Requirements for Nuclear Environmental Sites

Table of Contents

1.0	PURPOSE	4
2.0	SCOPE	4
3.0	TRAINING	4
4.0	DEFINITIONS	5
5.0	RESPONSIBLE PERSONNEL	7
6.0	PROCEDURE.....	7
6.1	Periodic Inspections	7
6.2	Event-Driven Inspections	13
7.0	LESSONS LEARNED.....	18
8.0	RECORDS.....	18
9.0	REFERENCES	18
10.0	ATTACHMENTS.....	19
	Attachment A: Technical Qualifications	20
	Attachment B: Inspection Checklist.....	21

List of Acronyms and Abbreviations

BMP	best management practices
DOE	Department of Energy
ECR	Environmental Characterization and Remediation Group
EDS	employee development system
ENV	Environmental Stewardship Division
IIS	Inventory Isolation System
IWD	integrated work document
LANL	Los Alamos National Laboratory
NES	nuclear environmental site
NOM	nuclear operation manager
PL	project leader
QII	Quality Improvement and Integration
QP	quality procedure
QPPL	quality program project leader
RDL	responsible division leader
RLM	responsible line manager
RPF	Records Processing Facility
SER	safety evaluation report
SME	subject matter expert
TL	team leader
TSR	technical safety requirement
USQ	unreviewed safety question

QP-8.4, R0, Inspection and Maintenance Requirements for Nuclear Environmental Sites

1.0 PURPOSE

This quality procedure (QP) states the responsibilities and describes the process for developing an inspection and maintenance plan, performing inspections, performing event-driven inspections, and preparing an inspection report for nuclear environmental sites (NESS). This QP is, in part, based on guidance set forth by the Department of Energy (DOE) in DOE Guidance for Implementing the Long-Term Surveillance Program for UMTRA Project Title I Disposal Sites, February 1996, DOE/AL/62350-189.

2.0 SCOPE

All Environmental Stewardship Division—Environmental Characterization and Remediation Group (ENV-ECR) **participants** shall implement this mandatory QP when developing an inspection and maintenance plan, performing inspections (periodic and event driven), and preparing an inspection report for the Los Alamos National Laboratory (LANL, or the Laboratory) Environmental Stewardship Division.

3.0 TRAINING

- 3.1 **Participants shall train (through read training)** to and use the current version of this procedure; contact the author of this QP if the text is unclear.
- 3.2 **Participants using this QP** shall document training in accordance with QP-2.2, "Personnel Training Management," using the training documentation link at the end of this document if they possess a CRYPTOCARD and administrative authority to the Laboratory, employee development system (EDS), or using the Training Documentation form located in the forms section of the ENV-ECR Web page.
- 3.3 **The responsible project leader (PL)** shall monitor the proper implementation of this procedure.
- 3.4 **The responsible team leader (TL)** shall ensure that the appropriate personnel complete all applicable training assignments.
- 3.5 **Participants** may request any needed assistance with implementation of this procedure from the ECR Quality Integration and Improvement (QII) team.

4.0 DEFINITIONS

- 4.1 *Best management practices (BMP)*—Methods that have been determined to be the most effective, practical means of preventing or reducing pollution from nonpoint sources.
- 4.2 *CRYPTOCARD*—A CRYPTOCARD is a credit-card-sized computer that generates “one-time” passwords or “passcodes.” Like a desktop computer, it has a keypad for input, a display window for output, memory, and a microprocessor.
- 4.3 *Cover*—Defined on a site-specific basis through the design-basis documentation
- 4.4 *Design basis*—Information identifying the specific functions performed by a structure, system, or component of a facility as defined further in QP-6.1, “Design Basis.”
- 4.5 *Employee development system (EDS)*—The Laboratory’s official training records database that maintains and archives vital training records. EDS attributes include, but are not limited to, a training program catalog, registration and enrollment functions, class lists, course cost information, historical information of Laboratory worker training records, transcripts of completed training for Laboratory workers, individual training plans, and training reports.
- 4.6 *Evaluation criteria*—For NES, the evaluation criteria are as follows:
- no significant visual change in surface conditions (e.g., vegetation, maintenance conditions, surface water, erosion conditions, and access control) during the inspection cycle
 - no equipment, activities, or natural occurrences that increased a technical safety requirement (TSR) potential for violation or an increased potential for intrusion into the Inventory Isolation System (IIS)
- 4.7 *Event driven*—Adjective describing inspections conducted because of unforeseen events or circumstances. Events can be human-made or natural phenomena.
- 4.8 *Hold point*—A point at which work or other activities must stop until specified actions are completed.
- 4.9 *Inspection checklist*—A list of items used by the inspection team to ensure that inspection requirements are met and to document the inspection process.
- 4.10 *Inspection plan*—A controlled, written plan for an NES that describes the processes and schedule to follow for an inspection. The periodic

inspection plan is the “implementing document” as required by the safety evaluation report (Los Alamos National Laboratory) 2005. “Safety Evaluation Report for the LANL Nuclear Environmental Sites DSA/TSR,” Los Alamos, New Mexico).

- 4.11 *Inspection team*—A team of Laboratory employees or contractors having technical expertise, work knowledge, appropriate training, and/or other special qualifications for performing NES inspections.
- 4.12 *Nuclear environmental sites (NESs)*—Inactive waste-handling or disposal areas that have been characterized as nuclear sites because, based on an initial categorization, their inventory identified them as hazard category 2 or 3 according to the DOE-STD-1027 threshold.
- 4.13 *Participant*—An inclusive term for any University of California/staff augmentation employee, deployed worker, or subcontractor, inclusive of project leaders, team leaders, and project personnel, who participate in activities conducted by or on behalf of the ECR group.
- 4.14 *Periodic*—Adjective describing inspections conducted routinely for compliance with technical safety requirements. Periodic can mean annually or as otherwise determined based on the nature of the facility. According to the safety evaluation report, “periodic” will be no less than annually.
- 4.15 *Project leader*—A Laboratory employee or deployed worker directly responsible for the management of one or more projects.
- 4.16 *Quality procedure (QP)*—Within ENV/ECR, a QP is a document that describes the process for performing an activity governed by the Quality Management Plan.
- 4.17 *Responsible division leader (RDL)*—The division leader responsible for the facility where ENV-ECR work will be carried out.
- 4.18 *Responsible line manager (RLM)*—The ENV-ECR group leader, or designee responsible for approving and performing work associated with the subject project.
- 4.19 *Safety basis subject matter expert*—An ENV/ECR participant experienced with the NES safety-basis documents and requirements.
- 4.20 *Subject matter expert (SME)*—A Laboratory employee or subcontractor having technical expertise, work knowledge, appropriate training, and/or other special qualifications needed to properly assess NES inspection requirements.
- 4.21 *Team leader (TL)*—The team leader is in direct line of authority for the project leader.

- 4.22 *Technical reviewer*—An SME assigned to review purchase requests and the associated statements of technical and quality requirements, as assigned by the requester.
- 4.23 *Unreviewed safety question (USQ)*—A situation where (1) The probability of the occurrence or the consequences of an accident or the malfunction of equipment important to safety previously evaluated in the documented safety analysis could be increased; (2) The possibility of an accident or malfunction of a different type than any evaluated previously in the documented safety analysis could be created; (3) A margin of safety could be reduced; or (4) The documented safety analysis may not be bounding or may be otherwise inadequate. [10 CFR 830.3(a)]
- 4.24 *Witness point*—a point at which work or other activities must be observed while specific actions are completed.

5.0 RESPONSIBLE PERSONNEL

The following personnel are responsible for activities identified in this procedure:

- ENV-ECR participants (hereinafter referred to as “participants”)
- project leader
- quality program project leader
- responsible division leader
- responsible line manager
- subject matter expert
- team leader
- nuclear operations manager

6.0 PROCEDURE

6.1 Periodic Inspections

6.1.1 Developing the periodic inspection plan

- 6.1.1.1 The PL identifies and documents (Attachment A) the qualifications of technical experts to aid in developing the inspection plan.

Note: Qualified SMEs may include individuals experienced in safety basis, fire safety, stormwater and surface-water runoff, vegetation, burrowing animals, signage, maintenance, radiological surveillance, or any additional site-specific or programmatic experience necessary to evaluate relevant information and data.

- 6.1.1.2 The PL, along with the SMEs, reviews the site design-basis documentation and other information sources to identify the site-specific basis for compliance with the NES evaluation criterion.
- 6.1.1.3 The PL assembles information relevant to inspections, surveillance, and maintenance. Information gathered includes, but is not limited to, the following items:
- primary containment vessels (if any)
 - configuration of burial
 - depth of burial
 - inventory distribution
 - thickness, composition, condition, and other salient characteristics of the cover
 - existing erosion control best management practices
 - existing site access controls
 - signage requirements (safety and radiation protection)
 - near-site or on-site air quality stations and data
 - near-site and on-site monitoring wells and data
 - existing maintenance records
 - site activities having occurred during the past year, including maintenance
 - results of existing hold and witness points implemented in the past year
 - radiological surveillance
 - results of previous inspections
- 6.1.1.4 The PL, with the aid of the SMEs, reviews the inspection checklist (Attachment B), making additions or alterations of inspection requirements to suit known site conditions.

Note: Modifications to the checklist must be justified in the inspection plan.

6.1.1.5 The PL, with input from SMEs, writes an inspection plan containing the information developed. The inspection plan is to follow the format and organization of ER2005-0473, *Nuclear Environmental Sites Inspection Plan*.

6.1.1.6 The inspection plan should contain the following

- a description of specific inspection requirements to be followed for inspections within each subject matter area
- the inspection criteria checklist
- and a schedule for inspections

Note: Annual inspections are the default period for inspections of an NES under this QP.

6.1.1.7 If items are identified during the development of the inspection plan that require revision of the design basis, the design-basis document shall be revised according to QP-6.1, "Design Basis."

6.1.1.8 Photographic and written report records are used for meeting inspection documentation requirements.

6.1.1.9 Require specific locations for photographs to be identified in the inspection and maintenance report.

6.1.1.10 The station number, photograph number, and direction and angle of the photograph shall be noted on the inspection checklist to allow reference for future photos taken from the same orientation. This will allow comparison of site conditions over time.

6.1.1.11 The time and date stamp shall be imprinted upon the photographs.

6.1.1.12 The PL and SMEs prepare the inspection plan according to QP-4.9, "Document Review and Approval Process."

6.1.2 Review and Approval

6.1.2.1 The PL is responsible for ensuring formal review and approval of an inspection plan in accordance

with QP-4.9, "Document Development and Approval Process" and QP-3.5, "Peer Review Process."

6.1.2.2 The PL ensures that, at a minimum, reviews and approval of the inspection plan include the following individuals:

- RLM
- Safety-basis SME
- NES RDL
- QPPL or designee
- Team leader

6.1.3 Document Control will comply with QP-4.5, "Document Control and Distribution."

Note: Inspection plans will be controlled. Inspection plans will be archived in the Records Processing Facility (RPF) for future reference, according to QP-4.4, "Records Transmittal to the Records Processing Facility."

6.1.4 Inspection Process

6.1.4.1 If not part of the design basis documentation, the PL obtains a baseline topographic survey of sufficient resolution to use as baseline mapping and enters it into the design basis documentation in accordance with QP-6.1.

6.1.4.2 The PL identifies and documents an inspection team, using appropriate SMEs (Attachment A).

6.1.4.3 The PL will ensure that all requirements of Integrated Safety Management, Laboratory Performance Requirement 300-00-00.1 are met.

6.1.4.4 Ensure that training requirements for inspection team members are met or that escorts are available.

6.1.4.5 If required by IWD, ensure Radiological Control Technician support is scheduled.

6.1.4.6 Notify RDL, NOM, and/or RLM that inspections are going to take place. Ensure that inspection activity is on the NES Plan of the Week.

- 6.1.4.7 If personnel other than ENV-ECR participants are inspection team members, the PL documents their qualifications in the RPF database (Attachment A).
- 6.1.4.8 The inspection team performs the inspection and completes the checklist (Attachment B) to document field conditions.
- 6.1.4.9 With the help of the inspection team, the PL identifies any additional inspections or evaluations as well as triggering conditions (such as a minimum rainfall event) that require follow-up.
- 6.1.4.10 The inspection team shall sign and date the completed inspection checklist, certifying completion of the inspection.
- 6.1.5 Developing the Inspection and Maintenance Report
 - 6.1.5.1 The PL coordinates the development of an inspection and maintenance report in accordance with QP-4.9, "Document Review and Approval Process."
 - 6.1.5.2 The inspection team prepares an inspection and maintenance report, documenting the findings of the inspection team and the resulting requirements for maintenance, including the following:
 - A description and discussion of the inspection process
 - The completed inspection checklists, including the documentation of activities at adjacent areas
 - Discussions of any evaluations, including data collected during inspections
 - Evaluations of other existing data considered beneficial in evaluating NES conditions
 - A description of the condition of the NES ground surface relative to previous topographic conditions, including comparison for erosion conditions, etc.
 - Any special inspection considerations
 - Any needed repairs

- All required maintenance activities
 - Any necessary hold and witness points along with the originating basis, the responsible personnel, and the required documentation/action
 - The future inspection schedule (inspections shall not occur less than annually)
 - A schedule of maintenance activities
 - Any situations where unscheduled inspections may be appropriate
 - How changes in the cover condition warrant additional or alternate monitoring
- 6.1.5.3 If items are identified during the development of the inspection and maintenance report that require revising the design-basis documents, they shall be revised according to QP-6.1, "Design Basis."
- 6.1.6 Inspection and Maintenance Report Review and Approval
- 6.1.6.1 The PL is responsible for ensuring formal review and approval of an inspection and maintenance plan in accordance with QP-4.9, "Document Development and Approval Process," and QP-3.5, "Peer Review Process."
- 6.1.6.2 The PL ensures that at a minimum, reviews and approval of the inspection plan include the following individuals:
- RLM
 - safety basis SME
 - NES RDL
 - QPPL or designee
 - team leader

6.2 Event-driven Inspections

6.2.1 Background

Certain events may trigger special inspections on a nonperiodic basis. Event-driven inspections may be triggered by reports or information indicating that site integrity has been or may be compromised.

Event-driven inspections investigate and quantify specific problems found during a previous site inspection or sampling event. These inspections determine whether processes currently active on or near the site threaten site security or stability, and they evaluate the need for custodial maintenance, repair, or corrective action. Follow-up inspections should be made by technical specialists in an appropriate discipline (e.g., soils scientist or geomorphologist, etc.) to evaluate the processes under investigation.

Event-driven inspections begin with an initial site visit to determine the need for definitive tests or studies and to document site conditions. Additional visits may be scheduled if more data are needed to draw conclusions and recommend corrective action.

ENV-ECR may schedule event-driven inspections when it receives information that indicates site integrity has been or may be threatened. Events that could trigger follow-up inspections include, but are not limited to, severe vandalism, vehicle accident near the site, start-up of adjacent facility activities, intrusion by humans or livestock, severe rainstorms, snow storms or floods, and unusual natural events such as tornados and earthquakes. In the event that immediate corrective actions are required to either ensure compliance with TSRs or to put the site in a safe condition, notify the NOM or RDL to coordinate the actions and any necessary notifications. The RDL phone number is 667-0835.

Event-driven inspections will generally fall into one of the three types listed below:

- Natural phenomena that may have immediate impact to the NES trigger inspections. In this case, the evaluation criteria outlined in 4.4 are used.
- Non-ENV-ECR activities may trigger inspections. Activities or projects carried out adjacent to NESs may precipitate the need for visual evaluation to determine if the NES

safety basis is adequate or is affected by these activities or if those adjacent activities may increase the likelihood of a TSR violation. The goal of these inspections is to augment information required to perform the unreviewed safety question (USQ) process.

- Inspections are carried out after approved fieldwork at the NESs. The goal of these inspections is to determine if the fieldwork has compromised the inventory isolation system or has changed the surface conditions at the NES in any way that may require a change to the design basis or change to controls used during the surveillance and maintenance phase (i.e., when the site is inactive).

6.2.2 Natural Phenomena

- 6.2.2.1 The RDL, or designee, is responsible for determining initiators leading to event-driven inspections.
- 6.2.2.2 Inspections are completed within 48 hours of an initiated event. A standing integrated work document (IWD) has been prepared, thus allowing immediate inspections to be carried out.
- 6.2.2.3 Initiated inspections are carried out under the previous annual inspection plan and checklist with special consideration given regarding the initiating event.
- 6.2.2.4 A report documenting the event-driven inspection is prepared within 30 days of the inspection. At a minimum, this report must include the following:
 - A description of the initiating event and when it occurred.
 - A preliminary assessment of the maintenance, repair, or corrective action required.

Note: Corrective action will be carried out under QP-3.4, "Corrective Action Process."

- document any immediate actions taken to ensure TSR compliance or to put the site in a safe condition, as appropriate
- Conclusions and recommendations

- Assessment data, including field and inspection data, and photographs
- Names and qualifications of the field inspectors:
 1. RLM
 2. safety basis SME
 3. NES RDL
 4. QPPL or designee
 5. team leader

6.2.2.5 A copy of the report and supporting documentation will be maintained in the RPF. Reports will be submitted under QP-4.4, "Records Transmittal to the Records Processing Facility."

6.2.3 Adjacent Activities

Some of the NESs are adjacent to existing nuclear facilities and the USQ process completed for activities at those sites should consider the impact to nearby nuclear facilities such as the NESs. A number of the NESs are not near other nuclear facilities and the work that is done near the NESs may not go through a USQ process. In cases where ENV-ECR is notified that adjacent activities are to be performed, an event-driven inspection may be initiated. The goal of these inspections is to gather appropriate information to augment or initiate the USQ process.

6.2.3.1 An abbreviated inspection plan will be developed. The plan shall include the following:

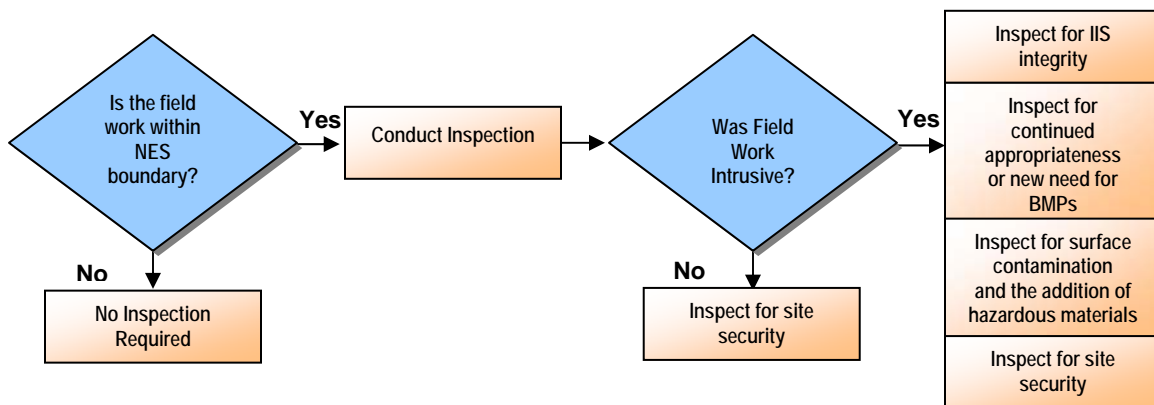
- Potentially impacted NESs
- Description of the triggering event and when it occurred
- Potential threat to NESs
- Potential documented safety analysis/safety evaluation analysis/TSR violation under investigation
- Goal of inspection
- List of inspectors

- 6.2.3.2 Streamlined inspection plan approval process will require approval from the RDL and the NOM.
- 6.2.3.3 Inspections are completed within one week of ENV-ECR being notified or becoming aware of the triggering event. A standing IWD has been prepared, thus allowing immediate inspections to be carried out.
- 6.2.3.4 A report documenting the event-driven inspection is prepared within 30 days of the inspection. At a minimum, this report must include the following:
- A description of the problem
 - A preliminary assessment of potential impact to the safety basis of the NES
 - Conclusions and recommendations (i.e., initiate USQs), and a summary of USQ outcomes
 - document any immediate actions taken to ensure TSR compliance or to put the site in a safe condition, as appropriate
 - Assessment data, including field and inspection data, and photographs
 - Names and qualifications of the field inspectors
 1. RLM
 2. safety basis SME
 3. NES RDL
 4. QPPL or designee
 5. team leader
- 6.2.3.5 A copy of the report and supporting documentation will be maintained in the RPF QP-4.4 "Record Transmitted to the Records Processing Facility."
- 6.2.4 Postfield Activity Inspections
- 6.2.4.1 Inspection plans will be strictly based on the scope of the fieldwork. The inspection plan will include the following:

- Field activity performed,
- Specific information required, and
- Field project closeout checklist.

6.2.4.2 The inspection area will be limited to the area that had a potential for impact based on the location of field activities.

6.2.4.3 Not all field activities will require a postactivity inspection. The flowchart below defines when a postfieldwork inspection is needed.



6.2.4.4 Streamlined inspection plan approval process will require approval from the RDL and the NOM.

6.2.4.5 Inspections are completed within 30 days of completion of the field project.

6.2.4.6 A report documenting the post-fieldwork inspection is prepared within 30 days of the inspection. At a minimum, this report must include the following:

- A brief description of the fieldwork
- Completed and signed field-closeout checklist
- Assessment data, including field and inspection data, and photographs
- List of any needed follow-up actions
- Names and qualifications of the field inspectors

Note: Formal approval of the report is not required; however, each inspector shall sign and date the report.

6.2.4.7 A copy of the report and supporting documentation will be maintained in the RPF.

7.0 LESSONS LEARNED

- 7.1 Before performing work described in this QP, participants should go to the Department of Energy Lessons Learned Information Services home page, located at <http://www.tis.eh.doe.gov/II/II.html>, and/or to the LANL Lessons Learned Resources Web page, located at http://www.lanl.gov/projects/lessons_learned/, and search for applicable lessons.
- 7.2 During work performance and/or after the completion of work activities, participants, as appropriate, shall identify, document, and submit lessons learned in accordance with the Lessons Learned System located at http://www.lanl.gov/projects/lessons_learned/.

8.0 RECORDS

The PL shall submit the following records to the Records Processing Facility in accordance with QP-4.4, "Record Transmittal to the Records Processing Facility":

- completed Technical Qualifications form
- completed and signed Inspection Checklist
- Inspection Plan
- Inspection Report

9.0 REFERENCES

To implement this QP properly, participants should become familiar with the contents of the following documents, located at <http://erinternal.lanl.gov/procedures.shtml>: "Quality Management Plan"

- Quality Management Plan
- QP-2.2, "Personnel Training Management"
- QP-3.4, "Corrective Action Process"
- QP-3.5, "Peer Review Process"
- QP-4.4, "Record Transmittal to the Records Processing Facility"
- QP-4.5, "Document Control and Distribution"

- QP-4.9, "Document Development and Approval Process"
- QP-6.1, "Design Basis"

Other related references:

- LANL (Los Alamos National Laboratory) 2005. "Safety Evaluation Report for the LANL Nuclear Environmental Sites DSA/TSR," Los Alamos, New Mexico.
- DOE (U.S. Department of Energy) 1996a. *Guidance for Implementing the Long-Term Surveillance Program for UMTRA Project Title I Disposal Sites, February 1996, DOE/AL/62350-189, Rev. 0, DOE UMTRA Project, DOE Environmental Restoration Division, Albuquerque, New Mexico.*

10.0 ATTACHMENTS

Participants using this QP may locate all forms associated with this procedure at <http://erinternal.lanl.gov/Quality/user/forms.asp>.

Attachment A: Technical Qualifications form (1 page)

Attachment B: Inspection Checklist (4 pages)

[Using a CRYPTOCARD, click here to record "self-study" training to this procedure.](#)

If you do not possess a CRYPTOCARD or encounter problems, contact the RRES-ECR training specialist.

Attachment A: Technical Qualifications		
Member's Name:	Title and Group:	Qualification:
		(See Note.)
<p>Note: State that the individuals' qualifications are described as an ENV-ECR position description <i>or</i> indicate that a resume of qualifications is attached.</p>		
QP-8.4, R0		Los Alamos National Laboratory ENV-ECR

Attachment B: Inspection Checklist	
Evaluated?	STORMWATER/EROSION CONTROL CONDITIONS
	<p>Are there areas of rill and gully erosion as a result of surface water runoff on or within 50 feet of the NES? (Y/N) If Yes do the following:</p> <ul style="list-style-type: none"> • Attach documentation of location (see note at end), depth, width, and direction. • Identify the need for further evaluation or corrective measures. • Document with photographs.
	<p>Are stormwater runoff controls operational and in good repair? (Y/N) If No do the following:</p> <ul style="list-style-type: none"> • Attach a description of conditions, identifying specific deficiencies. • Identify potential corrective actions that may be required. • Document the condition of stormwater runoff controls with photographs.
	<p>Are stormwater run-on controls operational and in good repair? (Y/N) If No do the following:</p> <ul style="list-style-type: none"> • Attach a description of conditions, identifying specific deficiencies. • Identify potential corrective actions that may be required. • Document the condition of stormwater run-on controls with photographs.
	<p>Is there headward gully erosion that may affect the site? (Y/N) If Yes do the following:</p> <ul style="list-style-type: none"> • Attach documentation of location, depth, and direction from NES. • Identify the need for immediate repair or additional assessment requirements. • Document gully erosion with photographs.
	<p>What is the condition of vegetation or other surfacings of the NES that contribute to erosion control? (These may be bare soil, grass, mixed vegetation, rock riprap, paving, etc.)</p> <ul style="list-style-type: none"> • List the type of surfacing and describe composition, as appropriate. • Attach sketches of the location and type of surfacing. • Qualitatively evaluate conditions relative to erosion control (Excellent, Good, Poor) for each covering type. • Assess the need for further evaluation, maintenance requirements, etc. • Provide photographs as deemed appropriate.
	<p>Are there other site features causing surface water run-on or runoff problems? These may include fences, trees, signs, fire hydrants, swales, topographic conditions, etc. (Y/N) If Yes do the following:</p> <ul style="list-style-type: none"> • Locate the feature and evaluate the affect on the NES surface. • Attach a description of the feature and identify how it influences NES surface conditions. • Photograph the feature.
	<p>Are there any surface disturbances as a result of previous site activities, including but not limited to maintenance? (Y/N) If Yes do the following:</p> <ul style="list-style-type: none"> • Locate the disturbance and evaluate condition and need for corrective maintenance. • Attach a description of the feature and identify how it influences NES surface conditions. • Photograph the disturbance.

Attachment B: Inspection Checklist (continued)	
Evaluated?	<p align="center">BIODEGRADATION CONDITIONS</p>
	<p>Are there trees or other deep-rooting plants on or near the NES that could penetrate into contaminated media, resulting in a potential to uptake radioactive material, increase the potential for infiltration into the subsurface, or otherwise disrupt the surface of the NES? (Y/N) If Yes do the following:</p> <ul style="list-style-type: none"> • Document the locations of the vegetation and determine if further actions (such as direct reading radiological measurements) are needed. • Evaluate any other potential disruptive nature of deep-rooted vegetation to determine the need for corrective maintenance or evaluate other potential disruptions of deep-rooted vegetation. • Photograph the area(s) where deep-rooted vegetation is present. <p>Note: If direct readings are collected and if there are above background readings, SMEs will determine if additional dose assessments or quantifications are needed.</p>
	<p>Are there indications of burrowing animal(s) affecting the cover surface or subsurface conditions? (Y/N) If Yes do the following:</p> <ul style="list-style-type: none"> • Locate the surface area affected by the animal(s) and evaluate the need for corrective maintenance. • Attach a description of the condition and identify the animal/insect type by its common name. • Photograph the area of surface impact.
<p align="center">FIRE CONDITIONS</p>	
	<p>What is the qualitative combustible loading of vegetation across or adjacent to the site? (Low, Medium, High)</p> <ul style="list-style-type: none"> • Attach a description of the combustible loading conditions, including locations where conditions are determined to be a problem. • When was the site last mowed? (if applicable) • What is the average grass height?
	<p>Are there adjacent fire conditions, such as stockpiled debris or material in and surrounding the NES to a distance of 50 feet? (Y/N) If Yes do the following:</p> <ul style="list-style-type: none"> • Locate the condition and identify the "owner." • Attach a description of the condition and identify the problem materials. • Photograph the condition.
<p align="center">SIGNAGE AND ACCESS CONTROL</p>	
	<p>Determine the location and inspect the condition of signage</p> <ul style="list-style-type: none"> • Is signage appropriate for sight conditions? (Y/N) • Are signs properly located? (Y/N) • Are signs in good repair and readable? (Y/N) • Are signs missing or are additional signs needed? (Y/N) <p>Locate areas needing documentation. Photograph areas needing documentation.</p>

Attachment B: Inspection Checklist (continued)	
	<p>Determine the condition of fencing and gates</p> <ul style="list-style-type: none"> • Do fences provide adequate security? (Y/N) • Document the condition of fences, including fence coatings. • Are locks and chains functioning properly? (Y/N) <p>Locate areas needing documentation.</p> <p>Photograph areas needing documentation.</p>
SITE MAINTENANCE ACTIVITIES	
	<p>Have the site maintenance activities been completed as scheduled? (Y/N)</p> <ul style="list-style-type: none"> • Identify maintenance performed and any observed field conditions related to the maintenance. • Locate any observed field conditions. • Photograph any observed field conditions.
	<p>Is there evidence of a need for additional/alterd maintenance requirements? (Y/N)</p> <ul style="list-style-type: none"> • List findings and document the issues leading to the conclusion. • Where possible, document identified needs with photographs.
<p>Note: Locate features using the Laboratory/ECR portable global positioning system.</p>	
ACTIVITIES AT ADJACENT AREAS	
	<p>Are there activities at adjacent areas? (Y/N)</p> <ul style="list-style-type: none"> • Fully describe activities, and document the location of activities. • Provide the RDL, if known.

Attachment B: Inspection Checklist (continued)	
INSPECTOR SIGNATURE CERTIFYING COMPLETION	
Project leader	
	(print name, then sign and date)
Storm water/erosion control	
	(print name, then sign and date)
Biodegradation conditions	
	(print name, then sign and date)
Signage and access control	
	(print name, then sign and date)
Fire conditions	
	(print name, then sign and date)
Site maintenance	
	(print name, then sign and date)
Other (Identify)	
	(print name, then sign and date)
QP-8.4, R0	Los Alamos National Laboratory ENV-ECR